EXPLORATORY FISHING EXPEDITION TO THE NORTHERN BERING SEA IN JUNE AND JULY, 1949.

By J. G. ELLSON, DONALD E. POWELL, AND HENRY H. HILDEBRAND. *Washington: 1950. Fishery Leaflet 369, U.S. Fish and Wildlife Service, U.S. Dept. of the Interior. 10½ x 8 inches; 56 pages; illustrations; diagrams and maps.*

This publication describes the methods and results of a United States Fish and Wildlife Service expedition by trawler (the 140-foot *Deep Sea*) which followed up the work of certain of their earlier expeditions in the same area. The waters of the northern Bering Sea were selected for the following reasons, quoted from the report: "A small beginning has already been made in this region by previous . . . surveys . . ., notably, the Alaskan King Crab Investigation, and the voyage of the USFWS *Washington* in 1941 and 1948 respectively; reports and rumors of potential fishery possibilities, both for fish and shellfish, have been received and continue to persist; such a resource, if actually located, would result beneficially to the economy of the communities and the local inhabitants of the area; the discovery of new productive grounds would benefit the fisheries by lessening pressure of fishing on existing grounds; practical and scientific knowledge gained would prove beneficial in attempting to understand the dearth, abundance, or migrations of fish in the area; and if or when the need should arise in the future to regulate the fisheries in the area, this type of information would prove of value."

The region studied stretched from the level of Nome southward almost to the Alaska Peninsula, and west to the international boundary. United States biologists and physical oceanographers have already done a considerable amount of work in this area from a general and faunistic point of view, and there was good promise of commercial possibilities. The region is subarctic, and the temperature range from north to south is considerable, from below zero (Centigrade) to over 6°C at the bottom. The abundance of fish was closely related to the bottom temperatures: Pacific cod (*Gadus macrocephalus*), various flatfish, and king crabs, were caught in large quantities in the 2° to 4°C range, while shrimp were found mostly in waters from 0° to 2°C. (For the benefit of Atlantic-minded zoologists, "king crab" in Pacific waters is the name given to a true crab (*Paralithodes*), not to the Arachnid *Limulus*, which does not exist there.)

The best cod and flatfish drags were made south and west of Nunivak Island, and "many catches containing several thousand pounds" were taken. Trawling bottoms were poor to the north but excellent along the eastern shore, where most fish were found.

Clearly the expedition was very successful; one more subarctic area has been shown to be rich in marine resources. The operation was designed to cover a wide area, so that the results could form the foundation for more intensive work in the future in specific localities and with various types of gear. The 1949 field work was confined to otter-trawling; fifty-one hauls were made.

Of the authors, Mr. Ellson and Mr. Powell are fishery engineers, and Mr. Hildebrand a fishery research biologist. Hildebrand worked on the Canadian Fisheries Research Board expeditions in Ungava Bay in 1947 and 1948, during the latter as leader of the field party. In March and April 1948 he made a study of freshwater fish in certain lakes near Fort Chimo, fishing through the ice with the Lake Winnipeg "Jigger".

M. J. DUNBAR